REMARKS

Claims 1-14 are pending.

A. Claims 1-14 were rejected under 35 U.S.C. §103(a) as being obvious in view of Harris (US 5,946,373) and Davis et al. (US 6,826,157). The applicant respectfully traverses this rejection for the following reason(s).

Response to Examiners Response to Arguments, paragraph 1, pages 1-2

Argument A. Examiner states Applicant argues the references individually, contrary to *In re Keller* and *In re Merck & Co., Inc.* (cites provided in final rejection).

In Keller, an affidavit was provided as objective evidence of non-obviousness, however, the affidavit concerned itself only with respect to one reference. In Merck, one of the references was argued as teaching way from the appellant's invention. Neither case is at issue here.

The Applicant did not **argue** each reference individually, but instead, discussed each reference individually, considered what each taught, individually and in combination, and then traversed the rejection.

It should be quite clear that the Applicant has followed the guidelines of *Graham v. John Deere*, 148 USPQ 459 (decided February 21, 1966), which stated: "Under § 103, the scope and content of the prior art to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this

background, the obviousness or nonobviousness of the subject matter is determined."

In determining the scope and content of the prior art, and the differences between the prior art and the claims at issue, one must discuss each reference individually. The Examiner did this when making the rejection and determining that Harris fails to teach *determining whether or not said alarm information corresponds to a logical alarm.* The Applicant also did this and came to the same conclusion, that Harris *determining whether or not said alarm information corresponds to a logical alarm.*

Then the scope and content of Davis was determined. Here the applicant determined that the scope and content of Davis was not analogous to the Applicant's invention nor the problem with which the Applicant was involved (a network management system for optimizing a database which stores alarm information generated from a plurality of network elements in order to manage those network elements), and not in the same field of endeavor as the Applicant's invention. Additionally, Davis is not analogous to Harris' invention.

Non-analogous is determined based on two parts, whether the reference is within the Applicant's field of endeavor and whether or not it is reasonably pertinent to the particular problem with which Applicant was involved. *See In re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979), *In re Antle*, 444 F.2d 1168, 1171-72, 170 USPQ 285, 287-88 (CCPA 1971).

The Examiner's has failed to provide a characterization of the problem with which the Applicant was involved, and has not shown that Davis is in the same field of endeavor as the Applicant's invention. The precise definition of the problem is important in determining whether a reference is from a non-analogous art.

It is well established in case law that **the combination** of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness. *Ex parte Haymond* (BdPatApp&Int) 41 USPQ2d 1217 (11/20/1996) (In our opinion it is only by using appellants' own teachings and relying upon impermissible hindsight that one versed in the art would have been led to even contemplate combining teachings of the Shapira articles with the clearly unrelated teachings of Hem or Tarr.); *Ex parte Dussaud* (BdPatApp&Int) 7 USPQ2d 1818 (6/9/1988) (Having applied the two-fold test for determining whether a reference is from a nonanalogous art, see In re Wood, supra , we hold that on the facts of this case the Penman reference constitutes nonanalogous art. **It is therefore not available as a reference in evaluating the obviousness of appellants' claimed invention under 35 USC 103.**) Emphasis added.

Argument B. Examiner argues hindsight relying on *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Note that *McLaughlin* qualifies the statement that some hindsight may be necessary by inclusion of "...and does not include knowledge gleaned only from applicant's disclosure".

One of ordinary skill in the art, absent any knowledge of the Applicant's invention, would not have looked to modify Harris' use of physical alarms to also include the use of logical alarms. *McLaughlin does not override the* case law such as *Pantec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 227 USPQ 766 (Fed. Cir. 1985) (Prior art may not be gathered with the claimed invention in

mind); *In re Warner*, 745 F.2d 1341, 166 USPQ 406, 407 ftnt. 3 (CCPA 1970); or *In re Horn*, 203 USPQ 969 (CCPA 1979).

Argument C. Examiner argues the Applicant's holding that Harris fails to teach determination of whether same alarm information has been generated and identifying whether same alarm information occurs more than once.

Here the Examiner refers us to Harris' col. 11, lines 25-30 and also refers to lines 30-55. Here, Harris teaches If any intersection is found with an existing inferred outage data structure, the association of the new outage to the existing depends on the precise condition of the correlation between the two sets of trunks. There are four possibilities:

1. The newly asserted set of trunks is identical to a previously asserted outage. In this case, no new information about the outage has been determined except that an additional trunk is involved, so the list is unchanged in step 267 but the counter is incremented by one.

2. The newly asserted set of trunks is a proper subset of a previously asserted outage. In this case, the list is assumed to be a better estimation of the outage location (smaller in scope), so the new list of trunks can simply replace the old one in step 267. The trunk counter is again incremented by one.

3. The set of trunks in a previously asserted outage is a proper subset of the newly derived outage. In this case, the larger new set indicates that the inferred outage location needs to be increased in topological scope (because additional trunks have exceeded their threshold since the first evaluation). Again, the new list replaces the old one and the counter is incremented by one in step 267.

4. The newly asserted set of trunks only partially intersects a previously asserted outage list. In this case, the inferred outage location may need to be expanded, contracted, or simply shifted somewhat. This situation can be resolved by taking the union set of the

> new and the old lists, then for all of those trunks taking the intersection of all common path sets in the individual trunk data structures. Like the initial outage set determination, this is the minimal set that explains all the circuit alarms. This new list replaces the existing one in the inferred outage data structure in step 267 and the counter is incremented.

Clearly there is no determination in Harris as to whether the *same alarm information* has been generated. Harris is concerned with which trunks have an outage. The cause of the outage is unknown. As required by claim 1 that cause *corresponds to a logical alarm.*

Harris is silent in this regard.

Conclusion regarding arguments A, B and C

Davis is non-analogous art, and therefor is not available as a reference in evaluating the obviousness of appellants' claimed invention under 35 USC 103. Davis cannot, therefore, be combined with the teachings of Harris. The combination is based on hindsight, and, *arguendo,* even if combined, the art fails to teach all the features of claim 1.

Accordingly, the rejection of claims 1-14 is deemed to be in error and should be withdrawn.

Claim 1

The present invention relates to a network management system for optimizing a database which stores alarm information generated from a plurality of network elements in order to manage those network elements.

In particular, when an alarm is received it is first determined whether the alarm is a logical

alarm or based on physical information. Then the network element generating the alarm is determined and a database is maintained to record the occurrence if it is a logical alarm as opposed to physical information. Each time a particular network element generates an already recorded alarm occurrence, a counter is increased with the increased count being recorded instead of recording the alarm event again.

The specification defines a logical alarm as one of, for example, a loss of link (LOL) or a poor quality of signal (QOS), and defines an **alarm** corresponding to a **physical error** as one of, for example, **loss of signal (LOS)**, alarm indication signal (AIS), loss of frame (LOF), or loss of pointer (LOP). See paragraph [0032].

Harris' invention also relates to a network management system. Harris discloses a method and apparatus for detecting traffic-affecting failures in a telecommunications network; by inferring the most probable location of each such failure, given multiple alarm indicators along a network circuit; correlating circuit alarms to trunk failures, or inferring trunk failures from circuit alarms; inferring the location of major network outages by topologically correlating multiple trunk failures; and filtering alarm reporting to the Fault Management System users such that only the most significant derived or inferred conditions are automatically displayed.

Harris appears to deal exclusively with alarms based on physical errors. There does not appear to be any disclosed determination of whether or not the alarm information corresponds to a logical alarm.

Note in col. 1, lines 61-65, Harris mentions "when a failure occurs on a circuit, the equipment

closest to the failure detects the fault ("loss of signal", for example), reports the fault, and propagates an alarm indicator signal in the "downstream" direction on the affected circuit." Accordingly, at least one fault in Harris is defined as a 'loss of signal," which has been defined by the present invention as a physical error instead of a logical error.

In col. 4, lines 11-14, Harris discloses that only certain alarm messages are extracted and analyzed, *i.e.*, "This invention contains an interface, shown in FIG. 2A, to the message reception process to extract only certain selected fault alarm messages as indicated in step 201. That is, those fault alarms indicating a circuit or trunk traffic outage, plus the messages that indicate that such a fault condition has now "cleared".

Accordingly, Harris is only concerned with physical errors and thus, physical alarms.

That is, Harris only checks for a circuit or trunk outage. **Harris does not look for the cause of the outage**, such whether it was due to a loss of link (LOL) or a loss of signal (LOS).

Therefore, as noted by the Examiner on page 3 of the Office action, there is clearly no method of *determining whether or not said alarm information corresponds to a logical alarm* (claim 1).

As mentioned above, Harris is only concerned with physical alarms, and thus has no desire to determine whether or not alarm information corresponds to a logical alarm. That is, Harris only teaches determining whether or not alarm information corresponds to a physical alarm.

The Examiner refers us to Davis as a teaching of maintaining an error counter for tracking a number of errors detected at network layers such as the data link layer, referring us to col.8, lines 1-30.

The Examiner then suggests it would have been obvious to combine Harris and Davis "cause doing so would create a method for managing alarm information into a database of errors from a specific network layer."

Davis is concerned with controlling the data rate in a communication device. Davis is not analogous to Harris. That is, Davis is not concerned with a network management system for optimizing a database which stores alarm information generated from a plurality of network elements in order to manage those network elements.

Managing the data rate in a communication device (such as a modem attached to a computer) is not even in the same field of endeavor as managing a plurality of network. It has not been shown that a person of ordinary skill, seeking to solve a problem of managing a plurality of network elements, would reasonably be expected or motivated to look to a teaching of managing a data rate in a communication device, such as a V.90 analog or client modem described in Davis.

The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness. There must be some reason, suggestion, or motivation found from or in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself. *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678-79, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686, 687,

2 USPQ2d 1276, 1278 (Fed. Cir. 1987); *Interconnect Planning Corp. v. Feil,* 774 F.2d 1132, 1147, 227 USPQ 543, 551 (Fed. Cir. 1985).

Davis' suggestion in col. 8, lines 18-24 that "[i]t is envisioned that additional or alternative counters may be defined and maintained for other types of data-link protocol errors, or even errors that are detected at higher levels in the communication protocol (e.g., network layer, transport layer, session layer, etc.) or at a lower level in the communication protocol (i.e., physical layer)" would not have suggested combining Harris' network management system with Davis' data rate management system, because the problems solved by the two references are not analogous.

In other words, Davis merely discloses that a data link unit controls counters for counting the number of errors in a data link, in which the counters count the packet having an invalid address, count the packet including data having ther uncorrected cyclic redundancy check (CRC) shecksum and count other types of data-link protocol errors, or even errors that are detected at higher, or lower, levels in the communication protocol.

Davis does not teach a construction of determining whether the generated error is a logical error or a physical error.

The specification defines a logical alarm as one of, for example, a loss of link (LOL) or a poor quality of signal (QOS), and defines an **alarm** corresponding to a **physical error** as one of, for example, **loss of signal (LOS)**, alarm indication signal (AIS), loss of frame (LOF), or loss of pointer (LOP). See paragraph [0032].

Further, Davis just discloses simply counting error, and fails to disclose the construction for

processing error information when the same error occurs.

Accordingly, the rejection of claim 1 is deemed to be in error and should be withdrawn. Additionally, since the rejection of claims 2-14 hinge upon the combination of Harris and Davis, and it has been shown that one of ordinary skill in the art would not have been motivated to combine these references, then the rejection of claims 2-14 is also deemed to be in error and should be withdrawn.

Claim 1 also calls for *increasing a count value representing a number of times in which the same alarm information has been generated, without redundantly storing said alarm information into said database, when it is determined that said alarm information is already stored in said database.*

In Harris' count process, each upstream trunk is processed in turn. On each trunk, a circuit alarm counter is incremented. The directionality of the circuit alarm with respect to the trunk is significant and separate counters are maintained for circuit alarms in each direction.

If the circuit alarm is the first alarm to be counted on a given trunk, or if the time-stamp of the alarm falls outside the window for presuming correlation with any previous alarms, then the time-stamp of that alarm and the set of all upstream trunks are stored in the data structure representing the trunk. Otherwise, if the circuit alarm is not the first one to be counted on a given trunk and the time-stamp of that alarm is within the window necessary for presuming correlation with the previous alarms, then the set of upstream trunks for the new alarm is intersected with that

of the previous alarm or alarms (that is, all trunks common to both sets are extracted), and the new list is stored in the trunk data structure. This intersection set will be referred to as the "common path set" for the circuits on the trunk: at any given time, this is the set of trunks that contain all of the same circuits as those counted on the given trunk. (This set always contains the given trunk itself, and it may contain only that trunk if the circuits do not have any other trunks in common.) The significance of this common path set is that the circuit alarms counted on the given trunk could actually be caused by an outage **on any of these trunks.**

Every time that a circuit alarm counter is incremented on a given trunk, then that trunk is evaluated to determine if a fault can be **inferred** from the circuit alarms or if a reported trunk fault can be confirmed to be affecting traffic on the contained circuits.

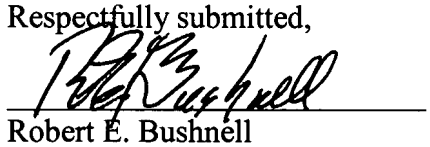
Accordingly, there is no determination as to whether the *same alarm* information has been generated. Harris clearly describes determinating whether "a fault can be inferred". The counter is incremented to record **the number of systems associated** with an outage, **not to identify when *same alarm information* occurs more than once.**

The Examiner does not rely on Davis in this regard. Accordingly, the rejection of claim 1 is deemed to be in error and should be withdrawn. In the same regard, the rejection of claims 2-14 is also deemed to be in error and should be withdrawn.

The examiner is respectfully requested to reconsider the application, withdraw the objections and/or rejections and pass the application to issue in view of the above amendments and/or remarks.

Should a Petition for extension of time be required with the filing of this Amendment, the Commissioner is kindly requested to treat this paragraph as such a request and is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of the incurred fee if, **and only if**, a petition for extension of time be required **and** a check of the requisite amount is not enclosed.

Respectfully submitted,



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